

United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

| FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. | |
|----------------------|---------------------|---|--|
| Eitan Cadouri | 524322000600 | 3719 | |
| | EXAM | EXAMINER | |
| | DANG, PHUC T | | |
| | ART UNIT | PAPER NUMBER | |
| | 2818 | | |
| | | Eitan Cadouri 524322000600 EXAM DANG, I ART UNIT | |

DATE MAILED: 09/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | T | | H' |
|---|---|---|-----|
| | Application No. | Applicant(s) | |
| | 10/802,549 | CADOURI, EITAN | |
| Office Action Summary | Examiner | Art Unit | |
| | PHUC T. DANG | 2818 | |
| The MAILING DATE of this communication app Period for Reply | ears on the cover sheet with the c | orrespondence address | |
| A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DA - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period v - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned palent terrn adjustment. See 37 CFR 1.704(b). | ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be tim vill apply and will expire SIX (6) MONTHS from a cause the application to become ABANDONE | N. nely filed the mailing date of this communicatio D (35 U.S.C. § 133). | |
| Status | | | |
| 1) Responsive to communication(s) filed on elect | ion filed 7/28/2005. | | |
| 2a) ☐ This action is FINAL . 2b) ☑ This | action is non-final. | | |
| 3) Since this application is in condition for allowar | nce except for formal matters, pro | osecution as to the merits is | S |
| closed in accordance with the practice under E | Ex parte Quayle, 1935 C.D. 11, 45 | 53 O.G. 213. | |
| Disposition of Claims | | | |
| 4) Claim(s) 1-20 is/are pending in the application. | | | |
| 4a) Of the above claim(s) 16-20 is/are withdraw | vn from consideration. | | |
| 5) Claim(s) is/are allowed. | | | |
| 6)⊠ Claim(s) <u>1-9 and 12-15</u> is/are rejected. | | | |
| 7) Claim(s) 10 and 11 is/are objected to. | | | |
| 8) Claim(s) are subject to restriction and/o | r election requirement. | | |
| Application Papers | | | |
| 9) The specification is objected to by the Examine | ır. | | |
| 10)⊠ The drawing(s) filed on 16 March 2004 is/are: | a)⊠ accepted or b)□ objected t | o by the Examiner. | |
| Applicant may not request that any objection to the | | | |
| Replacement drawing sheet(s) including the correct | | | d). |
| 11) The oath or declaration is objected to by the Ex | caminer. Note the attached Office | Action of form PTO-1,52. | |
| Priority under 35 U.S.C. § 119 | | | |
| 12) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of: 1. Certified copies of the priority document 2. Certified copies of the priority document 3. Copies of the certified copies of the priority document application from the International Bureau * See the attached detailed Office action for a list | s have been received. s have been received in Applicat rity documents have been receive u (PCT Rule 17.2(a)). | ion No ed in this National Stage | |
| | | | |
| Attachment(s) 1) Notice of References Cited (PTO-892) | 4) 🔲 Interview Summary | / (PTO-413) | |
| Notice of References Cited (PTO-892) Notice of Draftsperson's Patent Drawing Review (PTO-948) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date | Paper No(s)/Mail D | | |
| | · <u>—</u> | ratent Application (PTO-152) | |

DETAILED ACTION

1. This application claims benefit of 60/454,706 filed on March 17, 2003.

Election/Restrictions

2. Claims 1-15 are considered for examining by election filed on July 28, 2005.

Claims 16-20 are non-elected claims and still pending in the application.

Oath/Declaration

3. The oath/declaration filed on March 16, 2004 is acceptable.

Specification

4. The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Application/Control Number: 10/802,549 Page 3

Art Unit: 2818

5. Claims 1-8 are rejected under 35 U.S.C. 102 (b) as being anticipated by Balamurugan (U.S. Patent No. 5,933,351).

Balamurugan discloses a method for locating dies cur from a silicon wafer comprising:

- a) obtaining a die placement of dice (dice are arranged in a pattern) to be formed on the wafer (54, Fig. 2);
- b) obtaining one or more locations (62, 66 and 68, Fig. 2) on the wafer (54, Fig. 2) contacted by one or more processing structures (Figs. 1-2) or a substance emitted by one or more processing structures (Figs. 3A-3B); and
- c) adjusting the die placement to increase yield of the dice based on the obtained one or more locations (62, 66 and 68, Fig. 2) on the wafer (54, Fig. 2).

Regarding claims 2-7, Balamurugan discloses a process for generating, determining and selecting with the highest yield from the plurality of die placement to achieve more good dice on the wafer as shown in Figs. 1-3B and col. 4, lines 36+.

Regarding claim 8, Balamurugan discloses the die placement includes an arrangement of reticle array and when each reticle array includes an arrangement of die (Figs. 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Art Unit: 2818

6. Claims 9, 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Balamurugan (U.S. Patent No. 5,933,351).

Regarding claim 9, Balamurugan does not disclose using clamps to contact one or more location in the process. However, Balamurugan discloses a wafer table (50) to hold the wafer (54) for not moving the locations in the process.

Then, it would have been obvious to one having ordinary skilled in the art at the time the invention was made to modify the teaching of Balamurugan by the above teaching for a purpose of improving a die placement in the process.

Regarding claim 12, Balamurugan teaches a method for locating dies cur from a silicon wafer comprising:

- a) obtaining a die placement of dice to be formed on the wafer (54), the die placement having an arrangement of reticle arrays (Fig. 2), wherein each reticle array (Fig. 2) includes an arrangement of dice to be formed on the wafer (54);
 - b) obtaining one or more locations (62, 66 and 68) on the wafer (54); and
- c) adjusting the die placement based on the obtained one or more locations (62, 66 and 68) on the wafer (54).

Balamurugan teaches all the featues of the claimed invention as discussed above, but does not disclose using clamps to contact the wafer in the process. However, Balamurugan discloses a wafer table (50) to hold the wafer (54) for not moving the locations in the process.

Then, it would have been obvious to one having ordinary skilled in the art at the time the invention was made to modify the teaching of Balamurugan by the above teaching for a purpose of improving a die placement in the process.

Regarding claims 13 and 15, Balamurugan discloses a process for generating, determining and selecting with the highest yield from the plurality of die placement to achieve more good dice on the wafer as shown in Figs. 1-3B and col. 4, lines 36+.

Regarding claim 14, Balamurugan discloses a further step comprising adjusting the one or more locations on the wafer based on the die placement, wherein the die placement and the one or more locations on the wafer are adjusted together (Figs. 2 and 3A-3B).

Allowable Subject Matter

7. The following is a statement of reason for the indication of allowable subject matter:

Claims 10-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

None of the prior art of records discloses the one or more processing structures includes a jet that emit a chemical solution or water at the wafer as cited in claim 10 and the die are formed on a first surface on the wafer, and wherein the one or more locations are on the first surface of the wafer or on a second surface on the wafer opposite the first surface as cited in claim 11.

Conclusion

Applicants are advised to cancel the non-elected claims 16-20 upon response to the next Office action if the application is considered to be allowed.

Application/Control Number: 10/802,549

Page 6

Art Unit: 2818

Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Phuc T. Dang whose telephone number is 571-272-1776. The examiner

can normally be reached on 8:00 am-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

David C. Nelms can be reached on (571) 272-1787. The fax phone numbers for the organization

where this application or proceeding is assigned are 703-872-9306 for regular communications

and Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding 11.

should be directed to the receptionist whose telephone number is 703-308-0956.

PV Langshow

Phuc T. Dang

Examiner

Art Unit 2818